WHAT IS CLAIMED IS:

1. A matched filter having a plurality of multiplication means for multiplying an input-sample stream and a predetermined code sequence together in predetermined unit by predetermined unit, wherein the results of multiplication by said plurality of multiplication means are summed and output, coprising:

said input-sample stream is a stream obtained by sampling a multi-path signal, and said matched filter has:

control means for determining, which multiplication means actually perform multiplication among said plurality of multiplication means, a minimum number of multiplication means necessary for a period of time during which there arrive path signals regarded as being effective among a plurality of path signals contained in said multi-path signal.

2. A matched filter according to claim 1, wherein the determination of effective and ineffective path signals is performed based upon reliability information such as signal-to-noise ratio and signal interference ratio of said multi-path signal.

3. A matched filter according to claim 1, wherein one of the path signals regarded as being effective is a path signal which is used to determine symbol timing of said multi-path signal.

4. A matched filter for obtaining and outputting correlation between an input-sample stream and a code

sequence having predetermined periodicity, comprising:

said input-sample stream is a stream obtained by sampling a multi-path signal, and said matched filter has:

multiplication means of a number equivalent to a

5   number of chips (spreading factor) of at least one symbol period;

addition means for summing outputs of said multiplication means and outputting the sum as a value representing correlation of said input-sample stream to

10   said code sequence; and

control means for determining, which multiplication means actually perform multiplication among said multiplication means, a minimum number of multiplication means necessary for a period of time during which there

15   arrive path signals regarded as being effective in the multi-path signal, and controlling said determined multiplication means to multiply said code sequence of one symbol length and each value of said input-sample stream.

5. A matched filter according to claim 4, wherein the

20   determination of effective and ineffective path signals is performed based upon reliability information such as signal-to-noise ratio and signal interference ratio of said multi-path signal.

6. A matched filter according to claim 4, wherein one of

25   the path signals regarded as being effective is a path signal which determines symbol timing of said multi-path signal.

7. A matched filter according to claim 4, wherein said

control means divides one symbol period of said code sequence into a predetermined number of portions and supplies these portions to respective ones of said multiplication means.

5   8. A matched filter comprising:

a plurality of delay elements connected in series and having an externally supplied input-sample stream input to one end thereof;

a plurality of multiplication means to which outputs

10 from said plurality of delay elements are applied as a first input signal and externally supplied data is applied as a second input signal for multiplying said first and second input signals together;

addition means for summing outputs of said plurality

15 of multiplication means and outputting the sum as a value representing correlation of said first input signal to said second input signal; and

control means for dividing said plurality of delay elements and said plurality of multiplication means into

20 blocks, performing enable/disable control block by block, and supplying each of said plurality of multiplication means contained in a block that has been enabled with a code constituting a partial code sequence of a predetermined code sequence; and

25 wherein said input-sample stream is a stream obtained by sampling a multi-path signal, and from among the blocks of said multiplication means, a block of the minimum number of multiplication means necessary for a

period of time during which there arrive path signals regarded as being effective in the multi-path signal is enabled by enable/disable control as a block which actually performs multiplication.

5 9. A matched filter according to claim 8, wherein the determination of effective and ineffective path signals is performed based upon reliability information such as signal-to-noise ratio and signal interference ratio of said multi-path signal.

10 10. A matched filter according to claim 8, wherein one of the path signals regarded as being effective is a path signal which determines symbol timing of said multi-path signal.

11. A matched filter according to claim 8, further
15 comprising an integration means for integrating output of said addition means of said enabled block.

12. A receiver for a mobile radio communication system that uses a matched filter set forth in claim 1.

13. A receiver for a mobile radio communication system
20 that uses a matched filter set forth in claim 4.

14. A receiver for a mobile radio communication system that uses a matched filter set forth in claim 8.

15. An arithmetic unit characterized by functioning as a matched filter set forth in claim 1.